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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LIN, WEN TAI

ART UNIT	PAPER NUMBER
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2154

10

DATE MAILED: 05/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/547,699

Applicant(s)

SCHEER, LYLE

Examiner

Wen-Tai Lin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. Claims 1-13 are presented for examination.
2. The text of those sections of Title 35, USC code not included in this action can be found in the prior Office Action.

3. Claims 1-10 are objected to because of the following issues:

(i) As to claim 1 line 10, it is unclear what is "the type of the server". There appears to be no explicit explanation or examples in the specification. During a telephone interview held on May 3, 2004, Applicant's representative clarified that "the type of the server" refers to the role of a server being a global master, local master, or a slave. If so, then there appears to be no enablement to the claimed invention, in particular during system boot-up when none of the server can decide what type of the other servers it is coupling to because none of the servers has assumed any specific role. Furthermore, there appears to be no teaching regarding assignment of unique identifiers to each of the servers. This is consider a critical step because without unique identifiers the servers within the group of slave servers or within the group of local master servers would not be able to distinguish among themselves.

Clarification/correction in response to this office action is required.

Claim Rejections - 35 USC § 103

4. Claims 1-7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers et al. (hereafter "Rogers") [U.S. Pub. 20010007086] in view of Dean et al. (hereafter "Dean") [U.S. Pat. No. 5914957].

5. As to claim 1, Rogers teaches the invention substantially as claimed including: a server network comprising:

- a global master server [150, 160 or 180, Fig.6];
- a local master server [170, Fig.6] coupled to the global master server via a first network and synchronized thereto; and
- one or more slave servers [e.g., 192-198, Fig.6; paragraph 54; i.e., since each individual equipment carries a unique TCP/IP address able to communicate information to a remote server, there must be a server embedded in each individual equipment] coupled to the local master server via a second network [i.e., the HTTP network] to perform manufacturing tasks to facilitate building products, the global master, local master and slave servers being programmed to perform different tasks [paragraphs 53-55].

Rogers does not specifically teach that the global master, local master and slave servers are programmed the same and the master or slave servers are automatically configured based on the type of the server to which they are coupled.

However, Dean teaches that a plurality of identical node can be automatically configured as server nodes (each assigned a unique identifier) by sending a configuration message from the master from a shared communication link [Abstract; col.1, lines 13-15; col. 1, line 60 – col.2, line 20], wherein the program executed by each of the configured node must be identical otherwise they would not be called “identical nodes”.

Based on the teachings of Dean, it is obvious that the method can be extended to a hierarchical server network wherein a higher level server (or local master node) may cause automatic configuration to occur among its immediate lower level servers.

Thus, it would have been obvious to one of ordinary skill in the art to have used a software template to program Rogers's three-level server hierarchy (i.e., global master, local master and slave servers) with the capability of assigning unique identity to each of the subordinate servers, because Rogers's servers, though functioning at different hierarchy, are directed to the same application. That is, it is obvious that Dean's method would facilitate the boot up process of Roger's server network.

6. As to claim 2, Rogers in view of Dean does not specifically teach that one of the servers is operable to program another server. However, Official Notice is taken that it is well known in the art to use a master server to program its subordinate slave servers. Since Roger and Dean's server hierarchy is cast in a master-slave relationship, it is obvious that at least the global master possesses the capability of programming the local masters; likewise at least one of the local master servers may be designated to

program the slave servers, because by doing so it could overcome the difficulty when any of the subordinate servers fails or need to be diagnosed.

7. As to claims 3-5, Rogers in view of Dean do not specifically teach that the communication over the first network should be secured or encrypted.

However, official notice is taken that securing transactions over network is well known in the art. Since Rogers's global server [e.g., 180, Fig.6] is a service station owner/parent company server [Rogers: paragraph 55], which communicates with the master server over the first network [e.g., the Internet] for business information such as billing, inventory, etc. [paragraphs 53 and 55].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have secured (e.g., using SSL to automatically invoke strong encryption methods) the communication over the first network, because Rogers's system uses the first network to transfer business information, which has to be protected from being intercepted by any third party.

8. As to claim 7, Rogers further teaches that the first network comprises the Internet [e.g., paragraphs 47 and 55].

9. As to claim 10, Rogers teaches that the second network comprises a local area network [paragraph 47].

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10. As to claim 6, since the features of this claim can also be found in claims 1, it is rejected for the same reasons set forth in the rejection of claims 1 above. Specifically, it is obvious that the global and local masters could use either synchronous or asynchronous mode for communication when the connection exists between them, while only the asynchronous mode can be used when the interconnection is unavailable. As for the additional limitation requiring a plurality of local master servers: it is obvious that Rogers automotive services may have been distributed at different locations and therefore it is clear that each separate location would require a local master server.

11. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers [U.S. Pub. 20010007086] and Dean [U.S. Pat. No. 5914957, as applied to claims 1-7 and 10 above, further in view of Steen et al. (hereafter "Steen") [U.S. Pat. No. 6510350].

12. As to claims 8-9, Rogers does not specifically teach the first network comprises a virtual or physical private network.

However, Steen teaches that virtual private network can securely stitch together a physical private network and a public network (such as the Internet) to safeguard remote access from the public network [e.g., col.5, lines 56-64].

Since Rogers's local master may be situated in a company private network (such as LAN) and allow for remote access via the Internet [see the connection between 170

and 180 of Fig.6], it is clear that, in view of Steen's teaching, Rogers's first network may be further secured by either imposing a virtual private network over the Internet for remote access, because there is a need for securing the business information (such as billing information) transferring over the first network and the concept of virtual private network is well known for providing such security.

13. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gubbi [U.S. Pat. No. 6434113] in view of Dean et al. (hereafter "Dean") [U.S.Pat. No. 5914957].

14. As to claim 11, Gubbi teaches a mechanism that when a network node detects the absence of a master network node, the node will automatically configure itself as an alternate network master [Abstract: lines 12-20; col.1, lines 19-33]. That is, Gubbi's teaching can be directly applied in a environment wherein network nodes are arranged in a hierarchical fashion, a network node (i.e., a local master) may take the role of a master network node (i.e., a global master) when it detects that the latter no longer exist via a first interface.

Gubbi does not teach that the local master in a hierarchical network environment automatically configures a plurality of nodes as slave nodes if the latter are coupled to the local master via a second interface. However, Dean teaches that a plurality of identical nodes can be automatically configured as slave nodes (each assigned a

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unique identifier) by its master node via a shared communication link (i.e., the second interface) [Abstract; col.1, lines 13-15; col. 1, line 60 – col.2, line 20].

It is obvious to one of ordinary skill in the art that combination of both Rubbi's and Dean's teachings would result in a fault-tolerant or self-organized hierarchical network, because Rubbi's method makes sure that the higher level servers are properly configured, while Dean's method makes sure that the lower level servers are properly configured, thus combination of both makes the automatic configuration of a hierarchical server network feasible.

15. As to claim 12, Gubbi and Dean do not specifically teach that the local master automatically generates a key and places the key on the global master to gain access to the latter. However, it is well known in the art for a node to authenticate/authorize an access request from another node by either establishing logon password checking process or using public-private key pair to obtain access permission. Thus it would have been obvious to one of ordinary skill in the art to have established a similar security measure in Gubbi and Deam's system because such measure would safe guard the system's global master.

16. As to claim 13, Dean teaches that the second interface is connected to a shared communication link or bus (Asbtract). Gubbi and Dean does not specifically teach that the shared link or bus is a local area network (LAN). However, it is well known in the art that a LAN is a popular form of shared communication link. It would have been obvious

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that Gubbi and Dean's second interface may optionally be connected to a LAN because LAN is a proven technology for providing communication channels among a group of local processors.

17. Applicant's arguments with respect to claims 1-10 on 12/17/2003 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (703)305-4875. The examiner can normally be reached on Monday-Friday(8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703)305-9678. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(703)746-7239 for official communications;

(703)746-7238 for after final communications; and

(703)746-5516 for status inquires draft communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Wen-Tai Lin

May 5, 2004

Wen-Tai Lin
5/5/04